

Serial Nr.: 09/483,416
Art Unit: 2871

UPA-00103

REMARKS

In the Office Action, claims 1, 3-4, and 7-9 are rejected under 35 U.S.C. §102(b) as being anticipated by Asada et al., claims 2 and 5-6 are rejected under 35 U.S.C. §103(a) as being unpatentable over Asada et al.

Claim 2 is cancelled. Claim 1 is amended to clearly define the invention in a patentable way to overcome the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a). Specifically, the amended claim 1 now includes the limitation that said common electrode has a plate-shaped structure substantially filling said pixel area below said plurality of pixel electrodes.

Asada et al. disclose an active matrix liquid crystal display in which common electrodes and pixel electrodes are respectively formed parallel to each other and have substantially herringbone shapes. It is well known in the art of active matrix liquid crystal display that the shapes of pixel electrodes or common electrodes greatly affect the electric fields and the orientation of the liquid crystals. Therefore, the art of Asada et al. requires that both electrodes be in a substantially herringbone shape. As can be seen in the specification of Asada et al., it is repeatedly emphasized that both electrodes are formed parallel to each other with substantially herringbone shapes (col. 3, lines 9-13, lines 52-60; col. 6, lines 1-10, lines 60-67).

It should be noted that in the art of active matrix liquid crystal display, a change in the shape of either pixel electrode or common electrode usually results in



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substantial and unexpected impact on the electric field that determines how the liquid crystals would be oriented, and is by no means a mere change in shape recognized as being within the level of ordinary skill in the art. Applicant respectfully contends that the Examiner's statement about the common electrode with a plate shape being an obvious matter of design is unwarranted. As can be clearly seen from the cited prior art, Asada et al. actually teach away the use of a plate-shaped common electrode by disclosing and claiming the preferred herringbone shaped common electrode.

The common electrode as recited in the amended claim 1 has a plate-shaped structure substantially filling the pixel area below said plurality of pixel electrodes. The common electrode of Asada et al. comprises a plurality of herringbone shaped electrodes which divide the pixel area into multiple regions and leaving significant portions of the pixel area unfilled below the pixel electrodes. The electric field results from Asada et al. is very different than that of the instant invention. Consequently, its effect to the orientation of liquid crystals and hence the viewing angle of the display are also different.

From the foregoing discussion, it is clear that the instant invention differs from the cited prior arts. The physical difference results in different effects and is not obvious. The amended base claim 1 has overcome all the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) and should be patentable. By virtue of dependency, claims 3-9 should also be patentable.

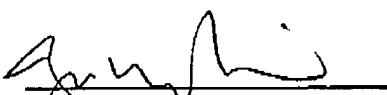


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FIG. 1 has been amended to use Arabic numbers for sectional designation as required in the Notice of Patent Drawing Review. It is submitted for approval. Accordingly, the specification is also amended so as to comply with the changes in the sectional designation. Claims 1 and 3-9 are pending for reconsideration. Formal drawings will be submitted after the application is allowed. Prompt and favorable reconsideration of the application is respectfully solicited.

Respectfully submitted,



Jason Z. Lin
Agent for Applicants
Reg. No. 37,492
19597 Via Monte Drive
Saratoga, CA 95070
(408) 867-9757

